CLAIMS

1. A method for network communication, comprising:

coupling an edge switch in a network to one or more access switches via at least first and second redundant links, respectively connected to first and second ports of the edge switch;

placing the first port in an active state, while placing the second port in a blocking state;

conveying communication traffic over the first link while the first port is in the active state, thereby causing each of the switches to build a respective database for use in forwarding the traffic;

responsive to a failure associated with the first link, placing the second port in the active state and the first port in the blocking state; and

sending dummy traffic from the edge switch over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective database responsive to the second port being in the active state.

2. A method according to claim 1, wherein placing the second port in the blocking state comprises configuring the first and second ports so that no loop is created in the network between the edge switch and the one or more access switches.

3. A method according to claim 2, wherein configuring the first and second ports comprises configuring the edge switch so as to decrease a radius of a spanning tree established in the network.

4. A method according to claim 1, and comprising, responsive to placing the second port in the active

state, updating the database of the edge switch so that entries in the database point to the second port instead of the first port.

5. A method according to claim 4, wherein updating the database comprises changing the entries in the database to point to the second port before receiving the communication traffic from the one or more access switches on the second port.

6. A method according to claim 1, wherein sending the dummy traffic comprises sending data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible to the access switches via the edge switch.

7. A method according to claim 6, wherein sending the data frames comprises copying the source addresses for the data frames from the database of the edge switch.

8. A method according to claim 7, wherein the edge switch has three or more ports, including the first and second ports, and wherein prior to the failure, the database comprises entries associated with a plurality of the ports, and wherein copying the source addresses comprises using the network addresses in all the entries that are not associated with the first port as the source addresses of the data frames.

9. A method according to claim 6, wherein sending the data frames comprises incorporating a Virtual Local Area Network (VLAN) tag in a header of the data frames.

10. A method according to claim 6, wherein sending the data frames comprises multicasting the data frames to all of the one or more access switches.

11. A method according to claim 1, wherein sending the dummy traffic comprises sending data frames downstream from the edge switch toward the access switches.

12. A method for network communication, comprising:

coupling a first bridge in a network to a second bridge located downstream of the first bridge, by connecting at least first and second redundant links to respective first and second ports of the first bridge so as to communicate with the second bridge;

placing the first port in an active state, while placing the second port in a blocking state;

conveying communication traffic over the first link while the first port is in the active state, thereby causing the bridges to build respective databases for use in forwarding the traffic;

responsive to a failure associated with the first link, placing the second port in the active state and the first port in the blocking state; and

sending dummy traffic from the first bridge over the second link downstream to the second bridge, so as to cause the second bridge to modify its database responsive to the second port being in the active state.

13. A network switching device, comprising:

a network port, adapted to be coupled over a network trunk link to a core switch in a network so as to exchange communication traffic with the core switch;

first and second access ports, adapted to be coupled via first and second redundant network access links to one or more access switches serving network users; and

a protocol processor, adapted to place the first access port in an active state, while placing the second access port in a blocking state, so that the communication traffic is conveyed over the first link while the first port is in the active state, thereby causing each of the access switches to build a respective access switch database for use in forwarding the traffic, the protocol processor being further adapted, responsive to a failure associated with the first link, to place the second access port in the active state and the first port in the blocking state and to send dummy traffic through the second access port over the second link to the one or more access switches, so as to cause each of the one or more access switches to modify its respective access switch database responsive to the second access port being in the active state.

14. A device according to claim 13, wherein the protocol processor is adapted to configure the first and second access ports so that no loop is created in the network between the edge switch and the one or more access switches.

15. A device according to claim 14, wherein the protocol processor is further adapted to configure the first and second access ports so as to decrease a radius of a spanning tree established in the network.

16. A device according to claim 13, and comprising a memory, wherein the protocol processor is adapted to build an edge switch database in the memory responsive to

the communication traffic prior to the failure associated with the first link and, responsive to placing the second access port in the active state, to update the edge switch database so that entries in the edge switch database point to the second access port instead of the first access port.

17. A device according to claim 16, wherein the protocol processor is adapted to update the entries in the database to point to the second access port before receiving the communication traffic from the one or more access switches on the second port.

18. A device according to claim 13, wherein the dummy traffic comprises data frames originating at the edge switch while having source addresses corresponding to network addresses of other entities in the network that are accessible to the access switches via the edge switch.

19. A device according to claim 18, and comprising a memory, wherein the protocol processor is adapted to build an edge switch database in the memory responsive to the communication traffic prior to the failure associated with the first link, and to copy the source addresses for the data frames from the edge switch database.

20. A device according to claim 19, wherein prior to the failure, the edge switch database comprises entries associated with a plurality of the ports, and wherein the protocol processor is adapted to use the network addresses in all the entries that are not associated with the first access port as the source addresses of the data frames.

21. A device according to claim 18, wherein the protocol processor is adapted to incorporate a Virtual Local Area Network (VLAN) tag in a header of the data frames.

22. A device according to claim 18, wherein the protocol processor is adapted to multicast the data frames to all of the one or more access switches.

23. A device according to claim 13, wherein the dummy traffic comprises data frames sent downstream from the edge switch toward the access switches.

24. A bridge device for use in a communication network having a spanning tree root, the device comprising:

a designated port, adapted to be coupled over an upstream link in the network so as to communicate with the root;

first and second downstream ports, adapted to be coupled via first and second redundant links to a further bridge device located downstream in the network relative to the spanning tree root; and

a protocol processor, which is adapted to place the first downstream port in an active state, while placing the second downstream port in a blocking state, so that communication traffic is conveyed over the first downstream link while the first port is in the active state, thereby causing the bridge devices to build respective databases for use in forwarding the traffic, the protocol processor being further adapted, responsive to a failure associated with the first link, to place the second downstream port in the active state and to send dummy traffic over the second link downstream to the further bridge device, so as to cause the further bridge

device to modify its database responsive to the second downstream port being in the active state.